

Claims:

1. A device, comprising:
N I/O lines, wherein N is an integer;
N internal networks;
N internal multiplexers for routing signals from individual I/O lines to individual internal networks in response to control signals; and
a multiplex controller for producing said control signals.
2. A device according to claim 1, wherein at least one multiplexer is an N-to-1 multiplexer.
3. A device according to claim 1, wherein at least one multiplexer is a 2-to-1 multiplexer.
4. A device according to claim 1, wherein at least one multiplexer is a 3-to-1 multiplexer.
5. A device according to claim 1, wherein at least one multiplexer can route signals to and from N-1 multiplexers.
6. A device according to claim 5, wherein each multiplexer can route signals to an associated array.
7. A device according to claim 1, wherein a multiplexer shifts signals on an I/O line to an adjacent multiplexer.
8. A memory device, comprising:
N I/O lines, wherein N is an integer;
N addressable arrays;
N multiplexers for routing signals from individual I/O lines to said addressable arrays in response to control signals; and
a multiplex controller for producing said control signals.

9. A memory device according to claim 8, wherein at least one multiplexer is an N-to-1 multiplexer.
10. A memory device according to claim 8, wherein at least one multiplexer is a 2-to-1 multiplexer.
11. A memory device according to claim 8, wherein at least one multiplexer is a 3-to-1 multiplexer.
12. A memory device according to claim 8, wherein at least one multiplexer can route signals to and from N-1 multiplexers.
13. A memory device according to claim 12, wherein each multiplexer can route signals to an associated array.
14. A memory device according to claim 8, wherein a multiplexer shifts signals on an I/O line to an adjacent multiplexer.
15. A computer, comprising:
 - a processor having at least W I/O lines;
 - a bus for transferring at least W I/O bits to and from said processor;
 - a memory module attached to said bus, said memory module for storing and saving a W-bit wide word, wherein said W-bit wide word is applied to said bus, wherein said memory module is comprised of a plurality of memory devices having more than W I/O lines, wherein at least one memory device has a spare I/O line that is not connected to said bus, and wherein said at least one memory device includes:
 - said spare I/O line;
 - N-1 I/O lines, wherein N is an integer;
 - N addressable arrays, at least one of which is associated with said spare I/O line;
 - N multiplexers for routing signals from said N-1 I/O lines and from said spare I/O line to said addressable arrays in response to control signals; and
 - a multiplex controller for producing said control signals;
 - wherein data on at least one of said N-1 I/O line can be stored in

and/or read from said array associated with said spare I/O line.

16. A computer according to claim 15, wherein at least one multiplexer is an N-to-1 multiplexer.

17. A computer according to claim 16, wherein at least one multiplexer is a 2-to-1 multiplexer.

18. A computer according to claim 17, wherein at least one multiplexer is a 3-to-1 multiplexer.

19. A computer according to claim 15, wherein at least one multiplexer can route signals to an associated array.

20. A computer according to claim 15, wherein at least one multiplexer shifts signals on an I/O line to an adjacent multiplexer.